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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,455	09/25/2003	Roger W. Kaufold	02-0448 (370045-00009)	9737

8840 7590 09/08/2004

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EXAMINER

SAVAGE, JASON L

ART UNIT PAPER NUMBER

1775

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/672,455

**Applicant(s)**

KAUFOLD ET AL.

**Examiner**

Jason L. Savage

**Art Unit**

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>02052004</u> . | 6) <input type="checkbox"/> Other: ____.  |

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***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 10, 15, 17-20, 27-28, 35 and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patrick et al (US 5,884,388) in view of Fogal et al (US 5,226,971).

Patrick teaches a method of coating a vehicle component with a protective wear resistant material (col. 1, ln. 8-15). Patrick is silent to the coated vehicle component being a wheel, however it teaches that protective coatings may be applied to other vehicle parts (col. 2, ln. 43-52).

Fogal teaches that rims or wheels of motor vehicles are subject to adverse conditions which degrade the quality of the wheel (col. 1, ln. 18-45). Fogal also teaches a method of treating used wheels wherein the wheel is refurbished and subsequently coated with a protective coating to provide the wheel and tire applied thereto with increased wear and service life (col. 1, ln. 48-62).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have recognized that the protective coating material for vehicle components as taught by Patrick could have been advantageously employed as the protective coating on a wheel in order to extend the wear and service life of the wheel and the tire applied thereto.

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Regarding claims 2-3 and 28, although the references are silent to the protective coating being applied to the tire bead seat area or retaining flange, the teaching of Fogal that the protective coating assists in increasing the wear and service life of the wheel and the tire applied thereto is taken as a teaching that the coating is applied to the tire bead seat and/or flange since that is the area in which the tire and wheel come into contact with each other.

Regarding claims 10 and 35, Patrick teaches that the protective coating material may be stainless steel (col. 3, ln. 5-32).

Regarding claim 15, although the references are silent to the coating being mechanically buffed, absent a teaching of the criticality of the claimed processing step, it would not provide a patentable distinction over the method of the prior art. Furthermore, it would have been within the purview of one of ordinary skill in the art to have recognized that additional post treatment processing, such as buffing of the coating, could provide advantageous properties that may extend the wear and service life of the wheel and tire.

Regarding claims 17-20 and 40-43, Patrick teaches that the vehicle component surface is prepared prior to coating by mechanical roughening, chemical etching or other means (col. 2, ln. 7-14). Regarding the limitation that the surface is subjected to high pressure water blasting, it is known in the art that roughening of the surface can be performed by water blasting. It would have been obvious to one of ordinary skill in the art to have employed any equivalent method of roughening the surface, including known

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methods such as water blasting, in order to have prepared the surface to receive the coating material.

3. Claims 4-9, 12-14, 16, 21-26, 29-34, 37-39 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patrick et al (US 5,884,388) in view of Fogal et al (US 5,226,971) as applied to claims 1-3, 10, 15, 17-20, 27-28, 35 and 40-43 above, and in further view of the admitted prior art.

The prior art teaches what is set forth above however it is silent to some of the claim limitations.

Regarding claims 4-5 and 29-30, the admitted prior art in paragraphs [0003-0004] of the specification states that vehicle wheels formed from cast and forged aluminum are conventional. It would have been obvious to one of ordinary skill in the art to have used a conventional wheel material, such as cast or forged aluminum, as the material for the wheel of the prior art.

Regarding claims 6-9, 11, 21, 23-25, 31-34, 36 and 44 the prior art does not teach that the protective coating comprises tungsten carbide, a nickel based superalloy, or aluminum silicon carbide material. However, the admitted prior art in paragraph [0027] teaches that it is known by those skilled in the art that alternate wear and corrosion resistant materials may be used as the coating material on the wheel. It would have been obvious to one of ordinary skill in the art to have selected a corrosion and/or wear resistant material such as those claimed since the admitted prior art states that it is known that equivalent wear resistant materials may be employed. Absent a

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teaching of the criticality of the claims materials, it would not provide a patentable distinction over the prior art.

Regarding claims 12-13 and 37-38, the prior art does not explicitly recite the claimed methods of application; however, the admitted prior art in paragraph [0033] teaches that any application technique (emphasis added) may be employed for applying the coating material to the substrate. It would have been obvious to have used any known method of applying a coating, including those claimed by Applicant, in order to form the wear resistant coating of Patrick in view of Fogal.

Regarding claim 14, since the admitted prior art makes it obvious that any material may be used for the coating material, it would have been within the purview of one of ordinary skill to have selected a material that could withstand the operating temperature the wheel is likely to encounter. Therefore the selection of a material that improves wear resistance at elevated temperatures, including temperatures up to 1200 °F, would have been an obvious modification to the prior art.

Regarding claim 16, 22-26, 31 and 39, Patrick teaches that the coating thickness may be about 0.010 inches (col. 3, ln. 3-32) but it does not teach that the thickness may be less than 0.010 inches. However, absent a teaching of the criticality of the claimed coating thickness, it would not provide a patentable distinction over the prior art since it would have been within the purview of one of ordinary skill in the art to have selected any coating thickness that was still capable of providing the wheel with enhanced wear and corrosion resistant properties.

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***Prior Art Made of Record but not Relied Upon***

4. Pesapane (US 3,906,894) teaches that it is known to apply protective coatings to wheels (col. 1, ln. 5-15). Pesapane further teaches that the protective coating on the annular cavities or seam which is taken as a teaching that the coating is applied to the tire bead seat area of the wheel (col. 1, ln. 5-15). Pesapane also teaches that the protective coating may be selected from a wide variety of materials including metals. (col. 1, ln. 5-15).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L Savage whose telephone number is 571-272-1542. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason Savage

8-23-04

  
DEBORAH JONES

SUPERVISORY PATENT EXAMINER